

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (previously presented) A method for managing radio frequency (RF) transmissions from an RF system of at least one mobile platform operating within a predetermined coverage region to a space-based transponder orbiting within said coverage region, in a manner to maintain a signal-to-noise ratio (E_b/N_o) of said RF transmissions within a predetermined range, the method comprising the steps of:

using a first control loop to monitor, by a central controller, a signal-to-noise ratio of said RF transmissions from said mobile platform that are received by said satellite transponder, and to transmit first power correction commands to said mobile platform via said satellite transponder for maintaining said signal-to-noise ratio of said RF transmissions from said mobile platform to within a predetermined range; and

using a second control loop including a mobile system of said mobile platform to monitor and further adjust a power level of said RF transmissions from said mobile platform to said satellite transponder, inbetween receipt of said commands from said central controller, by transmitting second power correction commands to said mobile platform, to maintain said power level of said RF transmissions from said mobile platform at a level previously commanded by said first power correction commands, inbetween receipt of updated power correction command signals from said central controller.

2. (original) The method of claim 1, wherein said predetermined signal-to-noise range comprises a range of about 1dB.

3. (original) The method of claim 1, wherein said predetermined signal-to-noise range is above a threshold signal-to-noise ratio of said central controller.

4. (original) The method of claim 1, further comprising the step of using said central controller to determine if said RF transmission from said mobile platform remains outside of said predetermined signal-to-noise ratio for more than about one second and, if so, commanding the mobile platform to cease said RF transmissions.

5. (original) The method of claim 1, wherein the step of monitoring by a central controller comprises monitoring by a ground-based central controller located within said coverage region.

6-20. (cancelled)

21. (previously presented) A method for managing radio frequency (RF) transmissions from an RF system of at least one mobile platform operating within a predetermined coverage region to a space-based signal relaying device orbiting within said coverage region, in a manner to maintain a signal-to-noise ratio (E_b/N_o) of said RF transmissions within a predetermined range, the method comprising:

forming a first control loop to enable a controller to monitor and determine power level correction commands for commanding said mobile platform to adjust a power level of said RF transmissions transmitted from an antenna of said mobile platform, to thereby maintain a power spectral density (PSD) of said RF transmissions, as experienced by a receiver of said space-based signal relay device, within a predetermined limit; and

forming a second control loop between said space-based signal relaying device and said mobile platform for further enabling changes to said power level of said RF transmissions from said antenna of said mobile platform to further ensure said PSD of said RF transmissions does not exceed said predetermined limit.

22. (previously presented) The method of claim 21, wherein forming said first control loop comprises:

using said controller to receive said RF transmissions; and

comparing said signal-to-noise ratio of said received RF transmissions with predetermined, reference signal-to-noise ratios and using said comparison to generate commands sent by said controller to said space-based transponder to extrapolate said PSD of said RF signal transmitted from said antenna from said signal-to-noise ratio of said RF transmissions.

23. (previously presented) The method of claim 21, wherein said second control loop enables said mobile platform to make changes to a power level of signals

transmitted from said mobile platform in between receipt of said power level correction commands from said central controller.

24. (previously presented) A method for managing radio frequency (RF) transmissions from an RF system of at least one mobile platform operating within a predetermined coverage region to a space-based transponder orbiting within said coverage region, in a manner to maintain a signal-to-noise ratio (E_b/N_o) of said RF transmissions within a predetermined range, the method comprising:

using a controller to form a first power level control loop for monitoring a power level of RF signals relayed by said space-based transponder, from said mobile platform, to said controller, for controlling a power level of said RF signals being transmitted by said mobile platform;

using said controller to generate first power level commands and transmitting said first power level commands to said space-based transponder for subsequent relay back to said mobile platform, for enabling said power level of said RF signals to be adjusted by said mobile platform; and

forming a second power level control loop between said mobile platform and said space-based transponder, wherein said mobile platform is able to implement second power level commands to said RF signals being transmitted from its said RF system independently of, and in between, said receipt of said first power level commands from said controller, to further control said power level of said RF signals being transmitted by said mobile platform.

25. (previously presented) The method of claim 24, wherein said controller further monitors an aggregate power spectral density (PSD) of signals received from a plurality of said mobile platforms operating within said predetermined coverage region to ensure that said aggregate PSD does not exceed a predetermined maximum value

26. (cancelled)

27. (previously presented) A method for managing radio frequency (RF) transmissions from an RF system of at least one mobile platform operating within a predetermined coverage region to a space-based transponder orbiting within said coverage region, in a manner to maintain a signal-to-noise ratio (E_b/N_o) of said RF transmissions within a predetermined range, the method comprising:

using a controller to form a first power level control loop for monitoring a power level of said RF transmissions being relayed by said space-based transponder from said mobile platform to said controller;

using said controller to generate first power level commands and transmitting said first power level commands to said space-based transponder for subsequent relay back to said mobile platform for use by said mobile platform in adjusting a power level of said RF signals; and

forming a second power level control loop between said mobile platform and said space-based transponder, independent of said first power level control loop, for enabling said mobile platform to monitor a power level of said RF transmissions transmitted from said mobile platform.

28. (cancelled)

29. (cancelled)